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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,673	04/09/2004	An Duc Nguyen	11336/711 (P03034USU2)	1407

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PAULEY PETERSEN & ERICKSON  
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SUITE 365  
HOFFMAN ESTATES, IL 60195

EXAMINER
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NI, SUHAN

ART UNIT	PAPER NUMBER
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2615

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/06/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/821,673

Applicant(s)

NGUYEN ET AL.

Examiner

Suhan Ni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 1/8/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 19-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-16 and 18 is/are rejected.
- 7) ☒ Claim(s) 5-9 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/25/04; 4/25/05; 12/02/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Election/Restriction***

1. This communication is responsive to the provisional election made without traverse on 01/08/2007 to prosecute the invention of Group I, claims 1-18. Other Group, including claims 19-40 are withdrawn from further consideration, as being drawn to a non-elected invention. A complete reply to a future final office action must include cancellation of non-elected claims or other appropriate action (37 CFR 1.144). See MPEP § 821.01.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130 (b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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2. Claims 1-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-68 of U.S. Patent Application No. 10/821,521. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-68 of U.S. Patent Application No. 10/821,521 are similar in scope to claim 1-18 of the U.S. Patent Application 10/821,673 with obvious wording variations.

3. Claims 1-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-34 of U.S. Patent Application No. 10/821,520. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-34 of U.S. Patent Application No. 10/821,520 are similar in scope to claim 1-18 of the U.S. Patent Application 10/821,673 with obvious wording variations.

#### *Drawings*

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed limitations of “**a cone-type transducer**” (claims 10 and 12), “**a cone-type diaphragm**” (claim 14), and “**at least three points on the side portion**” (claim 17) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

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drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1, 4, 10-14, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kreitmeier (U. S. Pat. - 4,764,968).

Regarding claim 1, Kreitmeier discloses an acoustic transducer comprising: a frame (2); a diaphragm (7-9) comprising: a surface portion (8), and a side portion (Fig. 1) connected to the surface portion; and a connection (6) between the side portion of the diaphragm and the frame; where the connection joins the side portion of the diaphragm at points outside a plane of the surface portion of the diaphragm.

Regarding claim 4, Kreitmeier further discloses the acoustic transducer, where the diaphragm further comprises a reinforcing skirt portion (6) connected to the side portion.

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Regarding claims 10, 12 and 14, Kreitmeier further discloses the acoustic transducer, where the acoustic transducer is a cone-type transducer (Fig. 1).

Regarding claims 11 and 13, Kreitmeier further discloses the acoustic transducer, where the acoustic transducer is a low-profile transducer.

Regarding claim 16, Kreitmeier further discloses the acoustic transducer, where the connection is a pliable surround.

Regarding claim 18, Kreitmeier further discloses the acoustic transducer, where the connection is formed in a continuous path around side portion of the diaphragm.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 11, 13, 15-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsao (U. S. Pat. - 5,231,672).

Regarding claim 1, Tsao discloses an acoustic transducer comprising: a diaphragm (13-14 and 16) comprising: a surface portion (13), and a side portion (Fig. 2) connected to the surface portion; and a connection (31) between the side portion of the diaphragm and a supporting mean; where the connection joins the side portion of the diaphragm at points outside a plane of the surface portion of the diaphragm. But Tsao does not specially teach that said supporting means is a frame as claimed. Since providing a suitable frame for mounting a diaphragm is very well known in the art, it therefore would have been obvious to one having ordinary skill in the art at

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the time the invention was made to be motivated to provide the suitable frame for mounting the diaphragm, in order to utilize the diaphragm and further effectively manufacture the transducer.

Regarding claim 2, Tsao further discloses the acoustic transducer, where the diaphragm has a center of mass, and the connection is attached to the side portion of the diaphragm at locations that are substantially coplanar with the center of mass (Fig. 2).

Regarding claim 3, Tsao further discloses the acoustic transducer, where the diaphragm comprises a sheet of material folded to form the surface portion and the side portion (Fig. 2).

Regarding claim 4, Tsao further discloses the acoustic transducer, where the diaphragm further comprises a reinforcing skirt portion (12, 31) connected to the side portion.

Regarding claims 11 and 13, Tsao further discloses the acoustic transducer, where the acoustic transducer is a low-profile transducer (Fig. 1).

Regarding claims 15-16, Tsao further discloses the acoustic transducer, where the diaphragm is a planar-type diaphragm, and where the connection is attached to the side portion of the diaphragm at locations that are substantially coplanar with the center of mass.

Regarding claim 18, Tsao further discloses the acoustic transducer, where the connection is formed in a continuous path around side portion of the diaphragm (Fig. 1).

***Allowable Subject Matter***

7. Claims 5-9 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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***Conclusion***

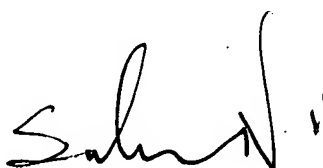
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(571)-272-7505**, and the number for fax machine is **(571)-273-7505**. The examiner can normally be reached on Tuesday and Thursday from 10:00 am to 8:00 pm, and may be reached on Monday, Wednesday and Friday from 10:00 am to 8:00 pm. If it is necessary, the examiner's supervisor, **Sinh N. Tran**, can be reached at **(571)-272-7564**.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(571)-272-2600**, or please see <http://www.uspto.gov/web/info/2600>.

03/26/2007

  
**SUHAN NI**  
**PRIMARY EXAMINER**